

USA v. Mario S. Levis

Walter Torous, Ph.D.
Professor UCLA Anderson School
Visiting Professor
Massachusetts Institute of Technology (MIT)

Qualifications and Experience

Walter Torous, Ph.D.

- Education
 - B. Math, Statistics and Economics 1976, University of Waterloo
 - Ph.D., Economics, 1981, University of Pennsylvania
- Professional Experience
 - Professor of Finance, UCLA Anderson
 - Managerial Finance, Real Estate Finance, and Empirical Methods in Finance
 - University of Michigan
 - London Business School
 - Visiting Professor, Massachusetts Institute of Technology (MIT)
 - Founding Director, Ziman Center for Real Estate
 - Editor, *Real Estate Economics* (official publication of American Real Estate and Urban Economics Association)

Qualifications and Experience (cont'd)

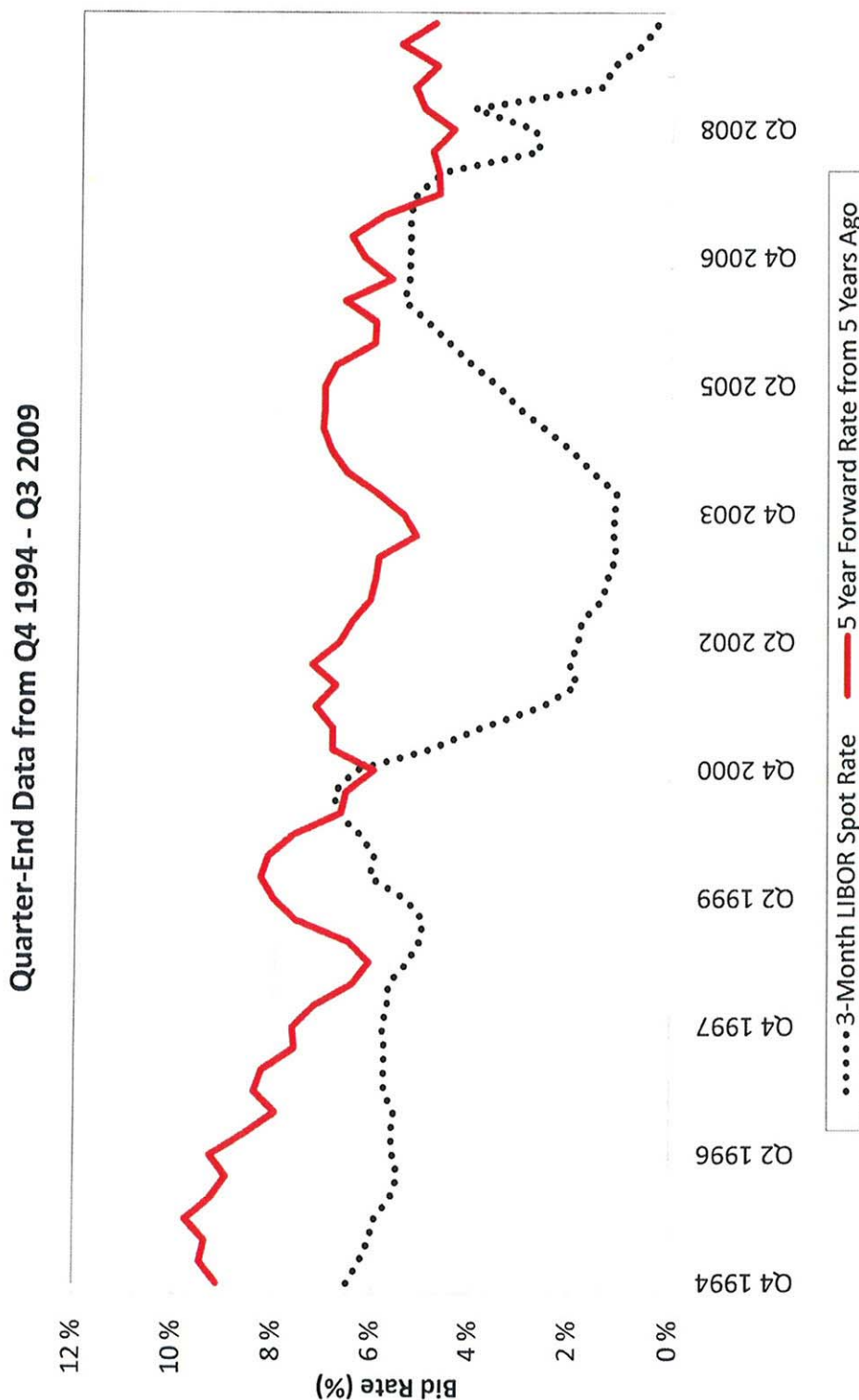
Walter Torous, Ph.D.

- Research
 - Pricing of Financial Instruments (options, futures, mortgages)
 - Reorganization of Financially Distressed Firms
 - Statistical Issues in Finance
- Professional Consulting
 - Government agencies
 - US Department of Housing and Urban Development
 - Federal Home Loan Mortgage Corporation (FHLMC)
 - Fixed income analytics provider
 - Capital Management Sciences (CMS)
 - Residential mortgage prepayment modeling

A

Difficulty in Predicting Future Interest Rates

3 Month LIBOR: Spot rate versus 5-year forward rate from 5 years ago



Notes: Forward rates are estimated using the LIBOR and USD swap rates (FWCV function in Bloomberg)
Source: Bloomberg Financial Markets

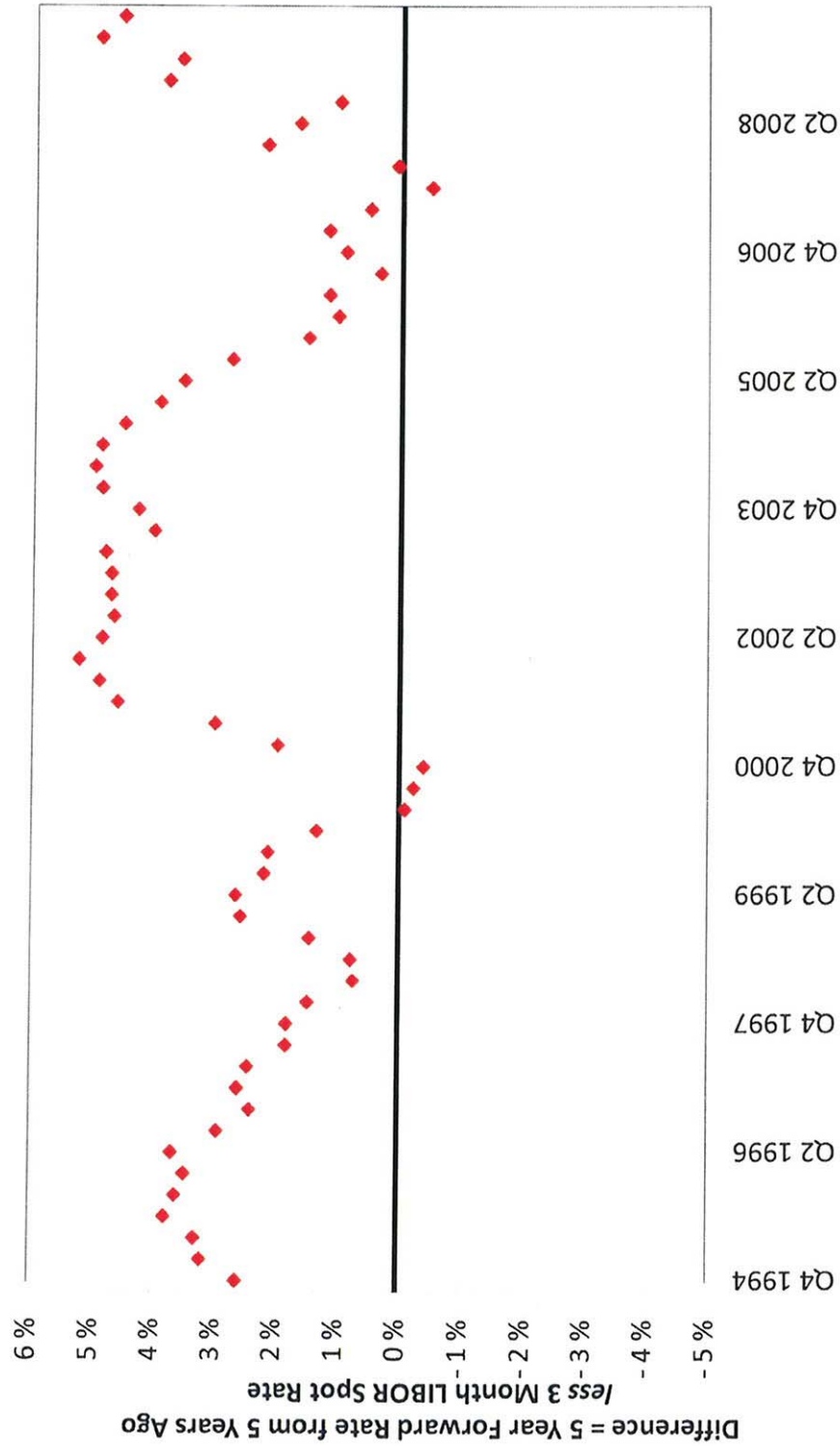
A

B

Difficulty in Predicting Future Interest Rates

Difference between spot rate and 5-year forward rate from 5 years ago

Quarter-End Data from Q4 1994 - Q3 2009



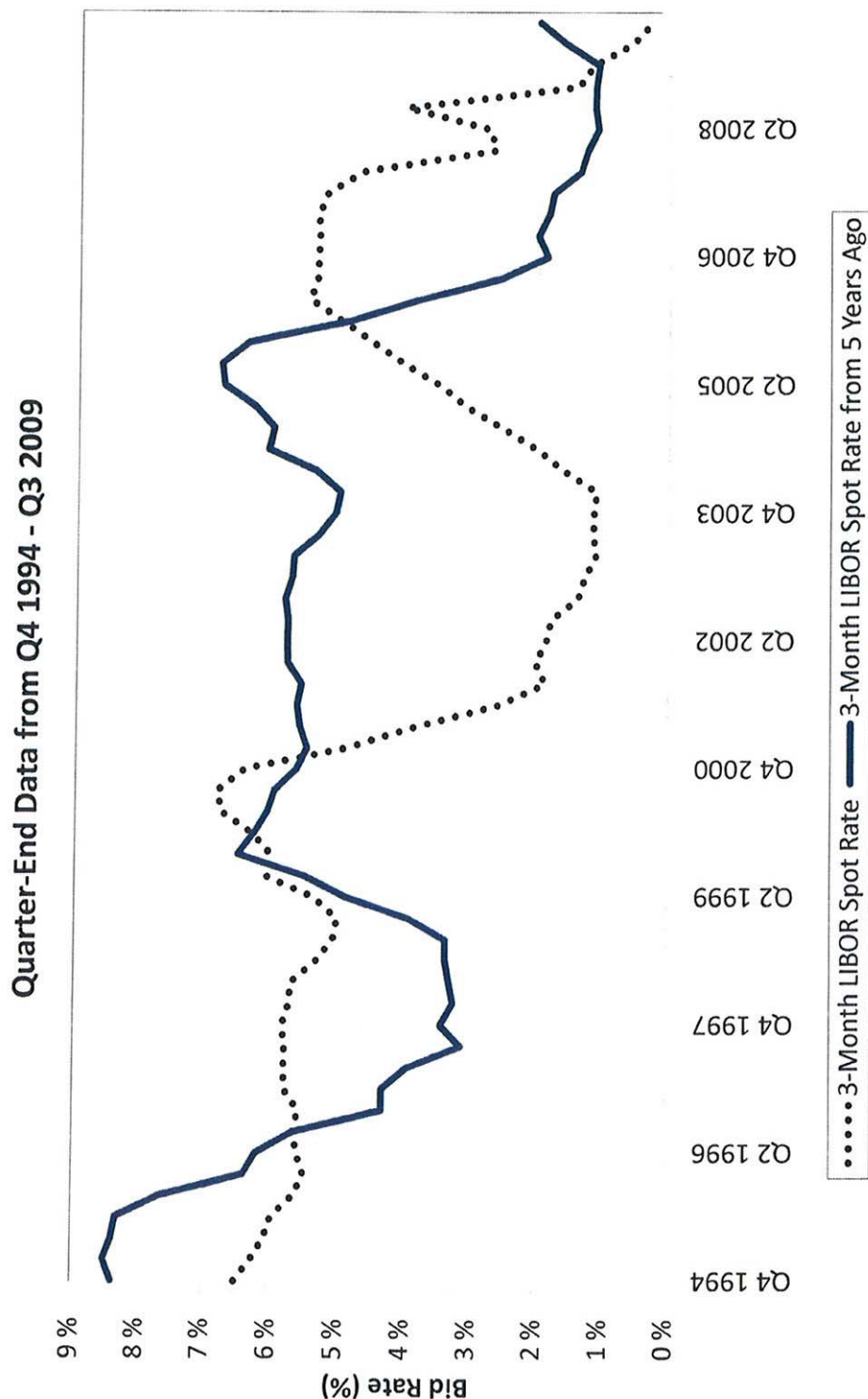
Notes: Forward rates are estimated using the LIBOR and USD swap rates (FWCV function in Bloomberg)

Source: Bloomberg Financial Markets

B

Difficulty in Predicting Future Interest Rates

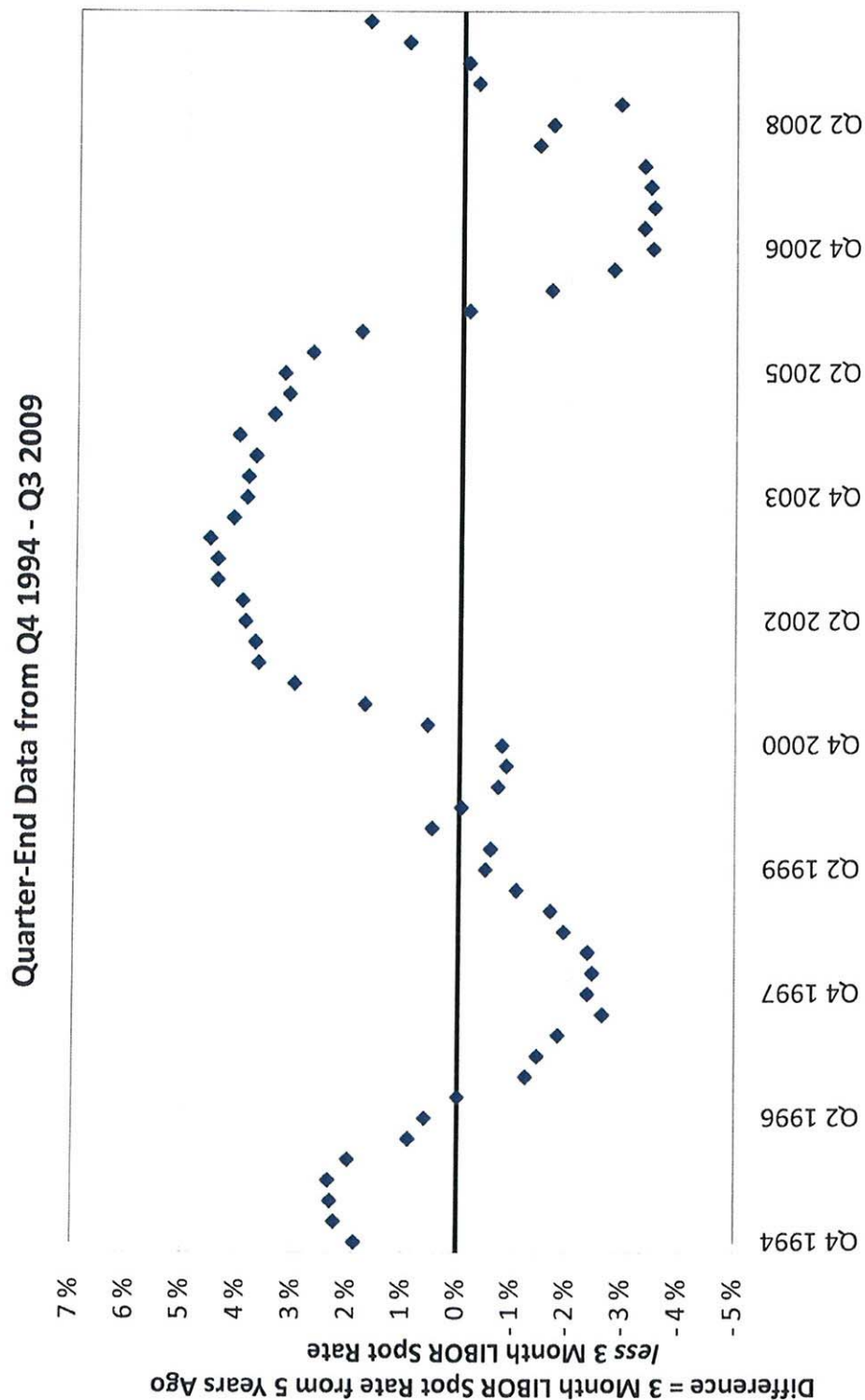
3 Month LIBOR: Spot rate versus historical spot rate from 5 years ago



Source: Bloomberg Financial Markets

Difficulty in Predicting Future Interest Rates

Difference between spot rate and historical spot rate from 5 years ago



Difficulty in Predicting Future Interest Rates

Implied forward rates versus future spot rates

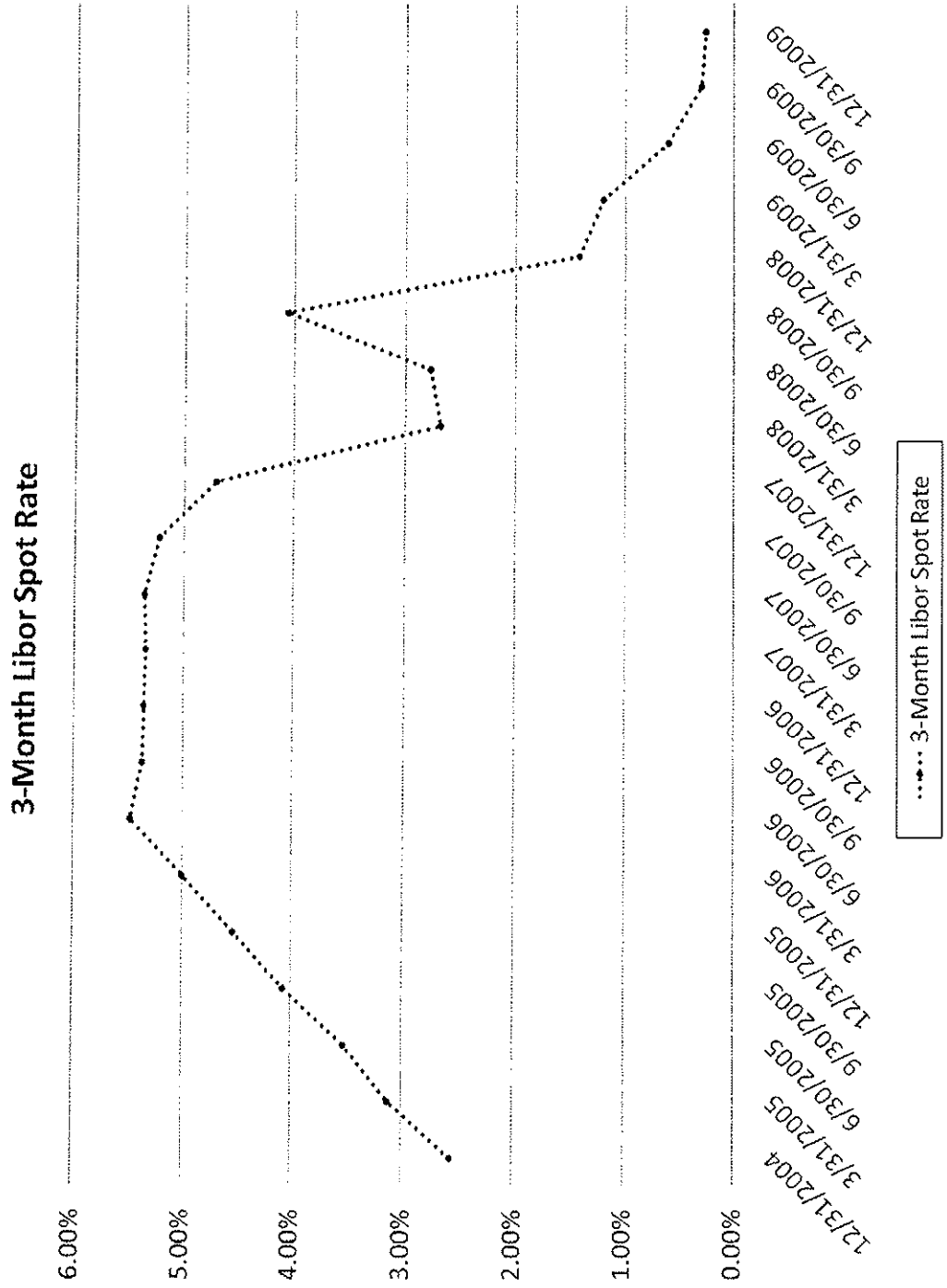
- Interpreting implied forward rates as reliable predictors of future spot rates is a *theory*
- *It is not a fact or a certainty*
- In fact, extensive academic empirical research concludes that implied forward rates are not reliable predictors of future spot rates
- For example, expectations hypothesis ignores risk and liquidity concerns in markets (liquidity preference)
- Today's spot rate may be as good as a forward rate in predicting a future spot rate

E

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Quarterly Spot Rate of 3 Month LIBOR

December 31, 2004 through December 31, 2009

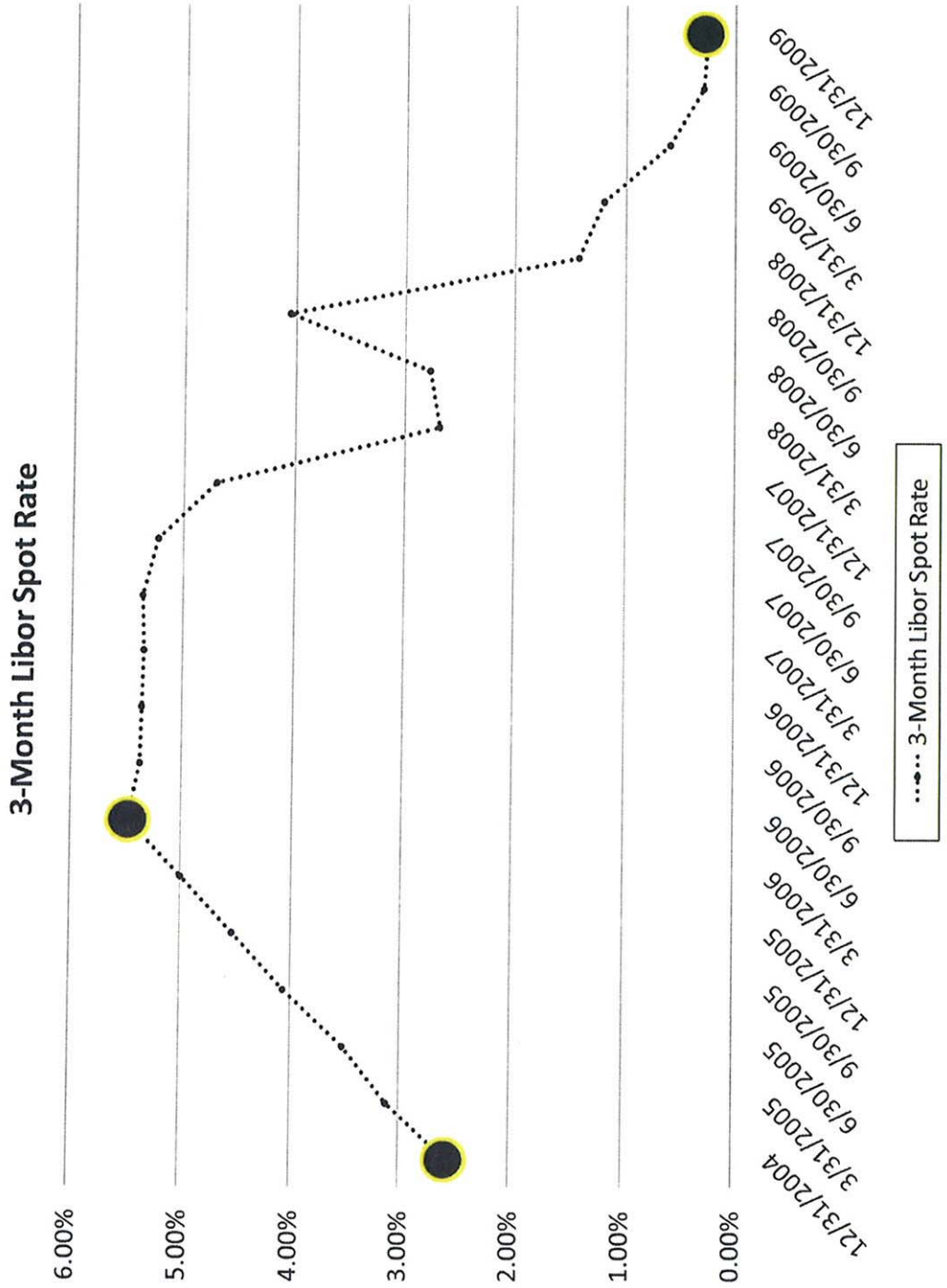


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F

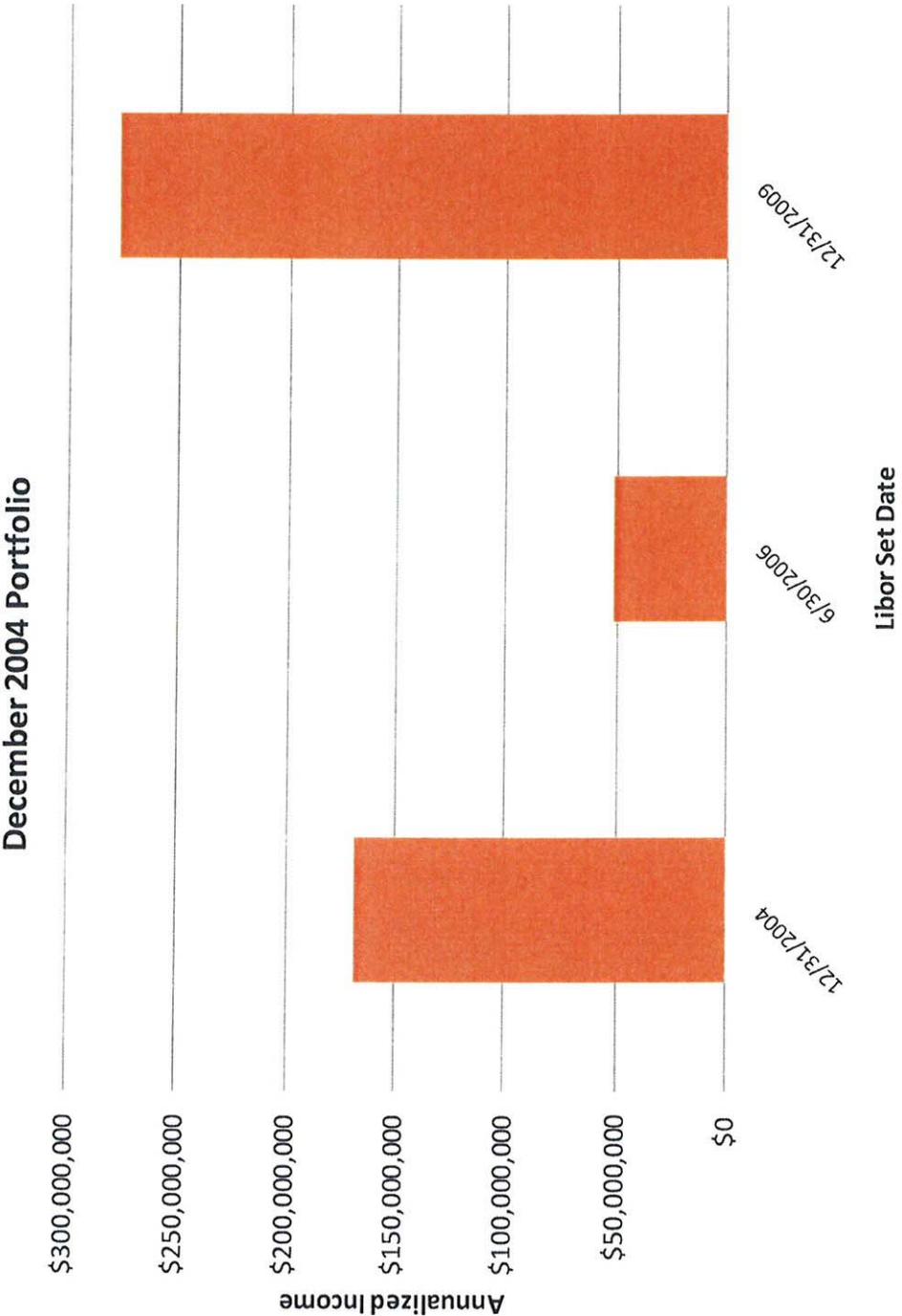
Quarterly Spot Rate of 3 Month LIBOR

December 31, 2004 through December 31, 2009



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Annualized Hypothetical Income of the Dec-2004 Portfolios
Assuming historical LIBOR rates, calls, and negotiated caps only

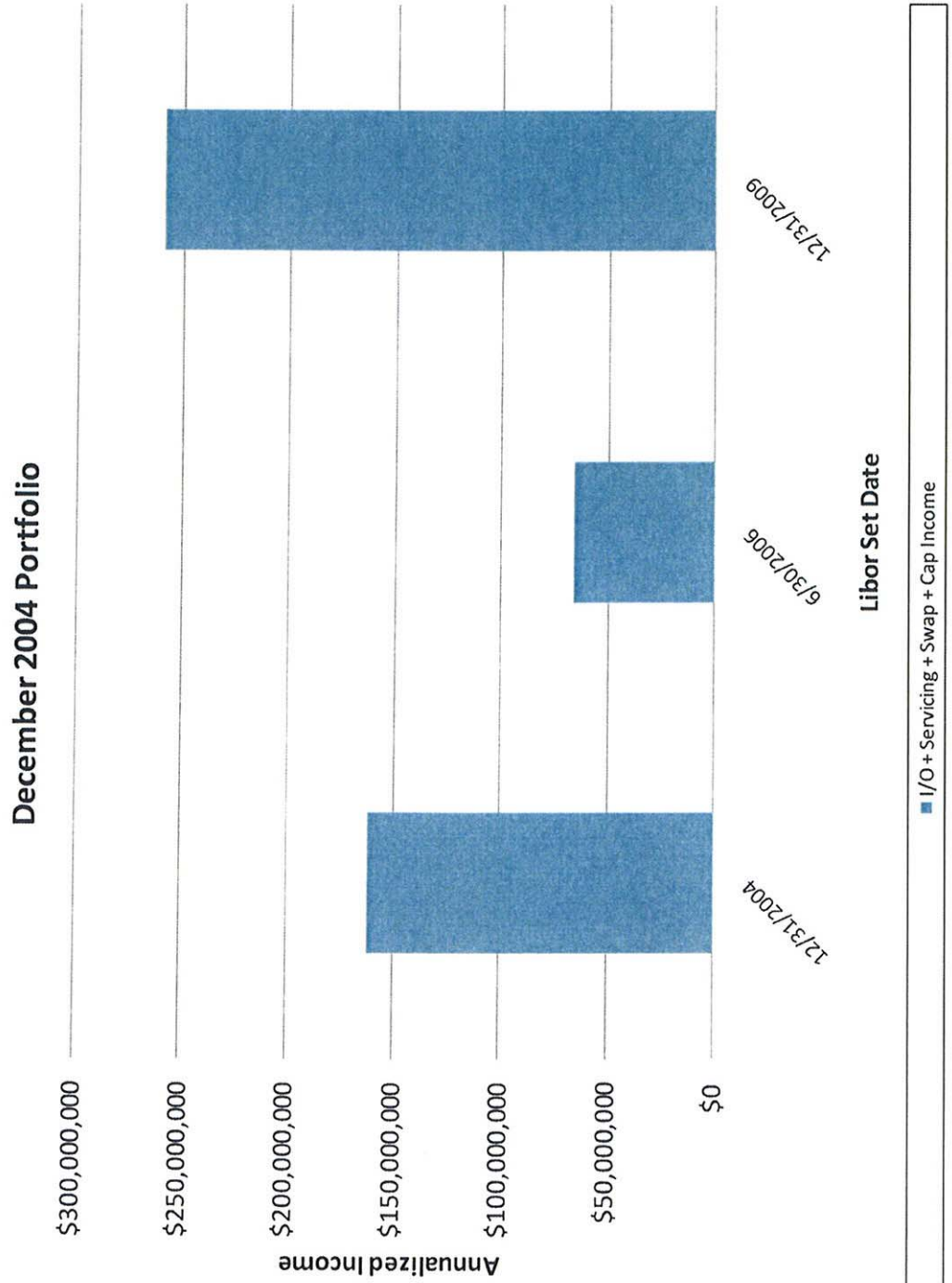


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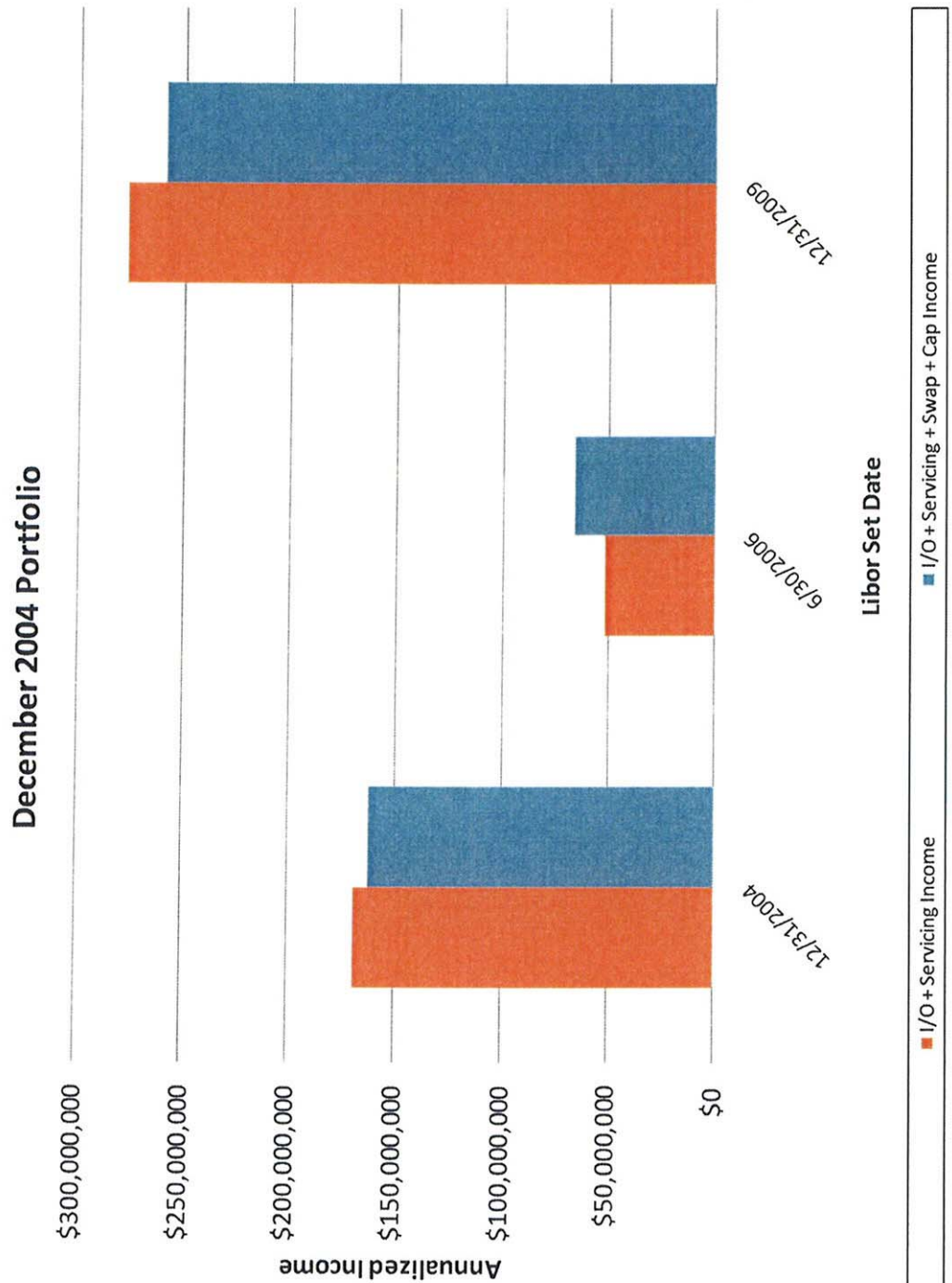
I

Annualized Hypothetical Income of the Dec-2004 Portfolios

Assuming historical LIBOR rates, calls, and negotiated caps only



Annualized Hypothetical Income of the Dec-2004 Portfolios *Assuming historical LIBOR rates, calls, and negotiated caps only*

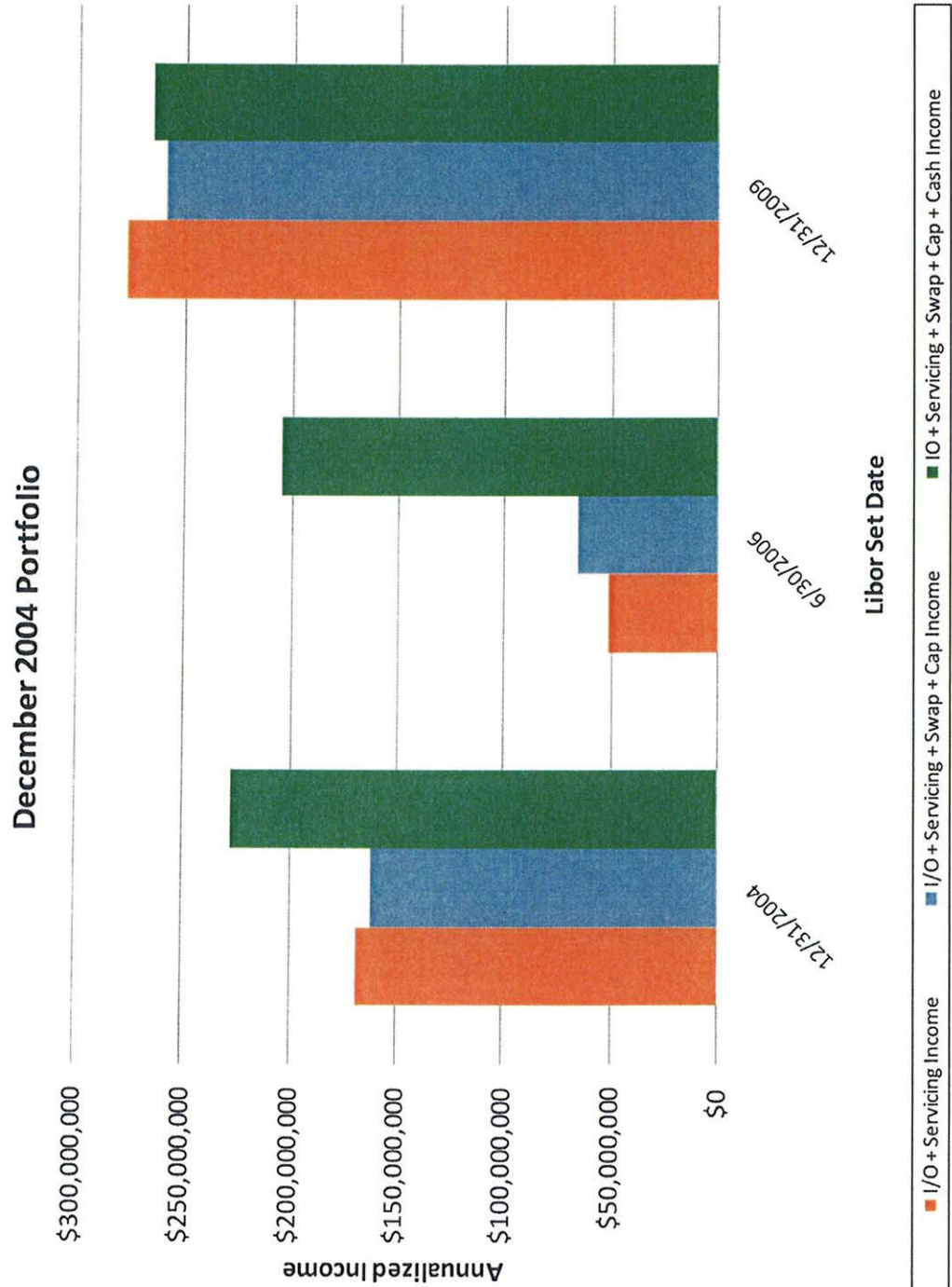


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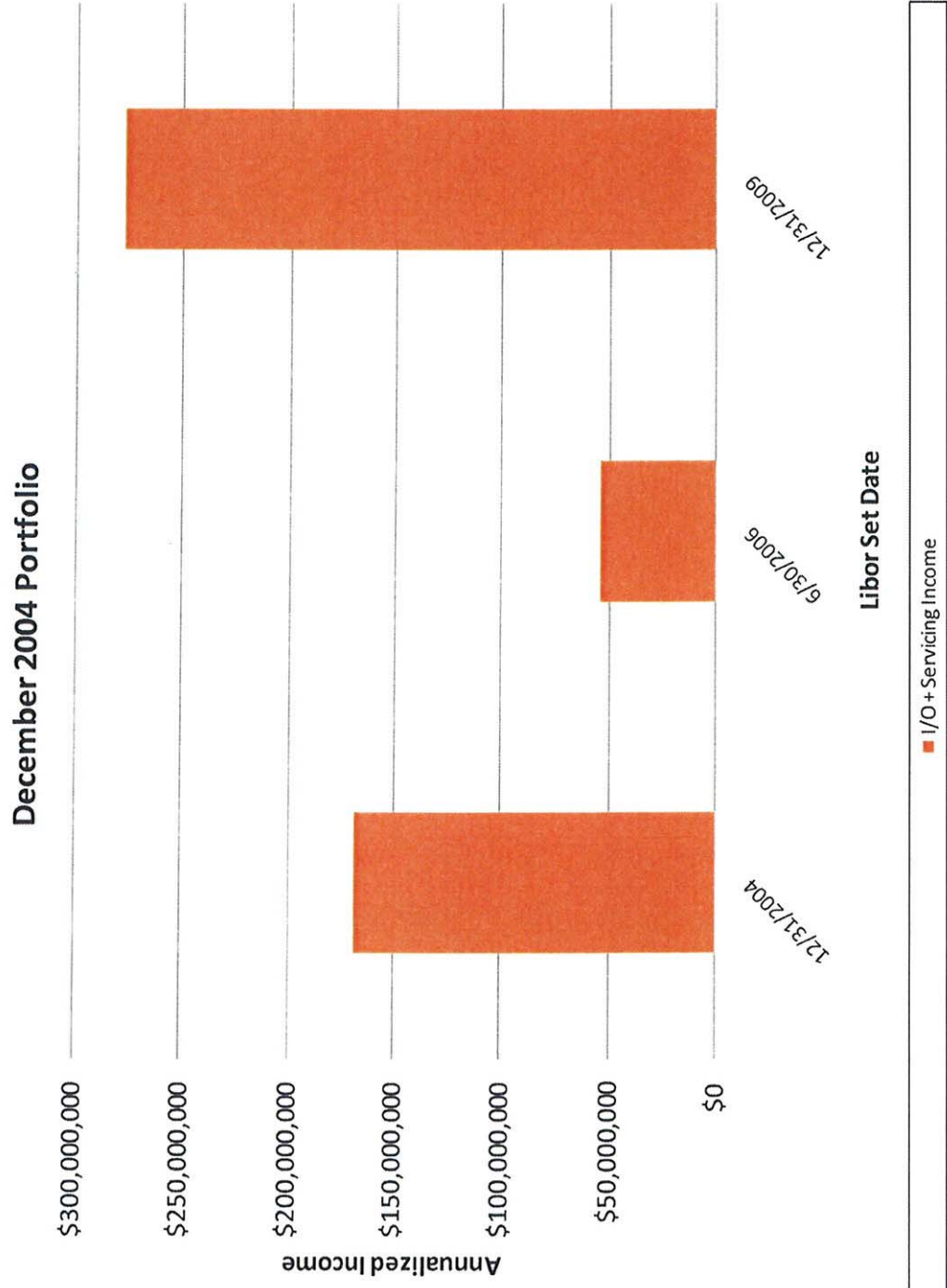
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Annualized Hypothetical Income of the Dec-2004 Portfolios

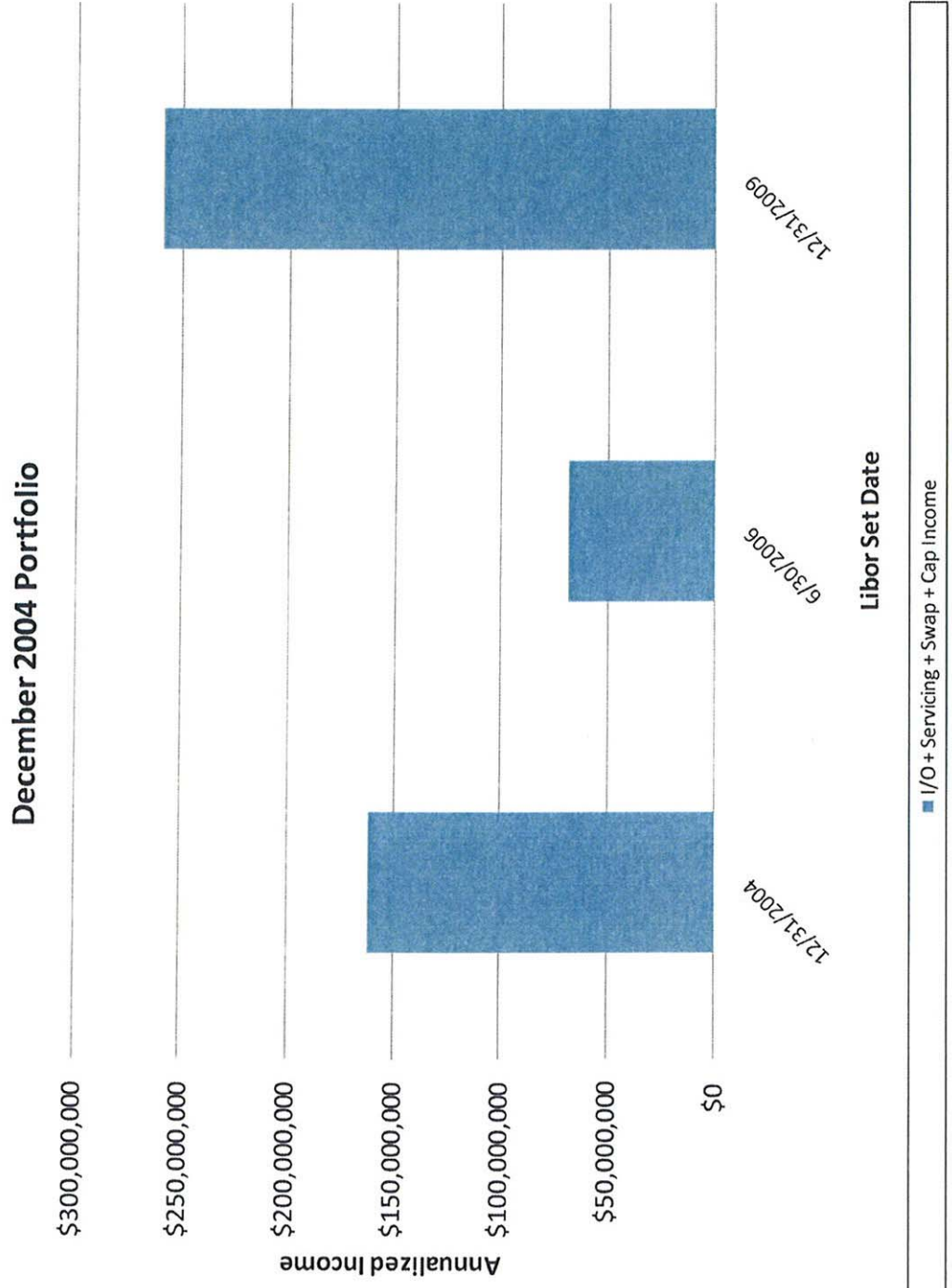
Assuming historical LIBOR rates, calls, and negotiated caps only



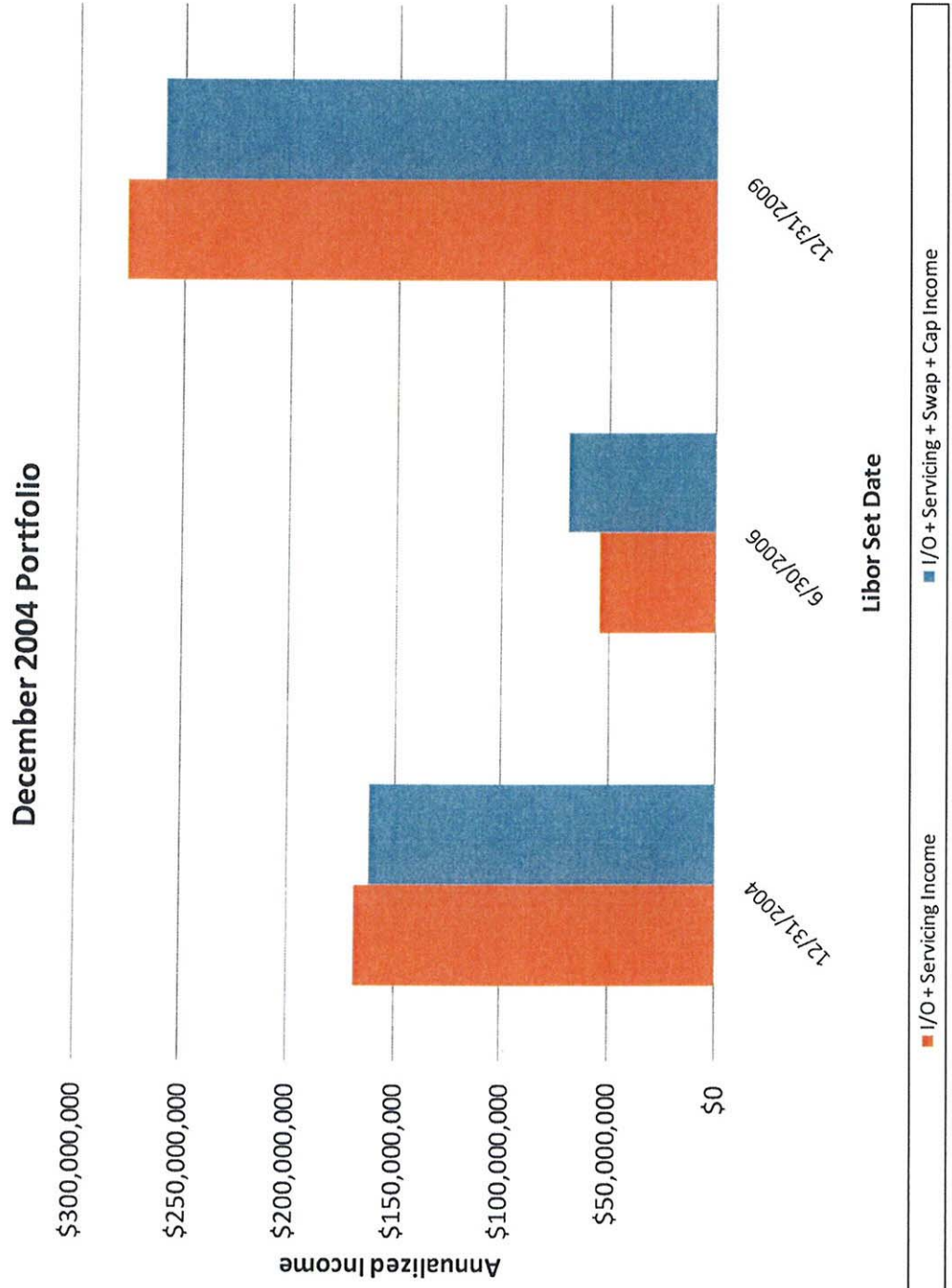
Annualized Hypothetical Income of the Dec-2004 Portfolios *Assuming historical LIBOR rates and cap at WAC, unless otherwise specified*



Annualized Hypothetical Income of the Dec-2004 Portfolios *Assuming historical LIBOR rates and cap at WAC, unless otherwise specified*

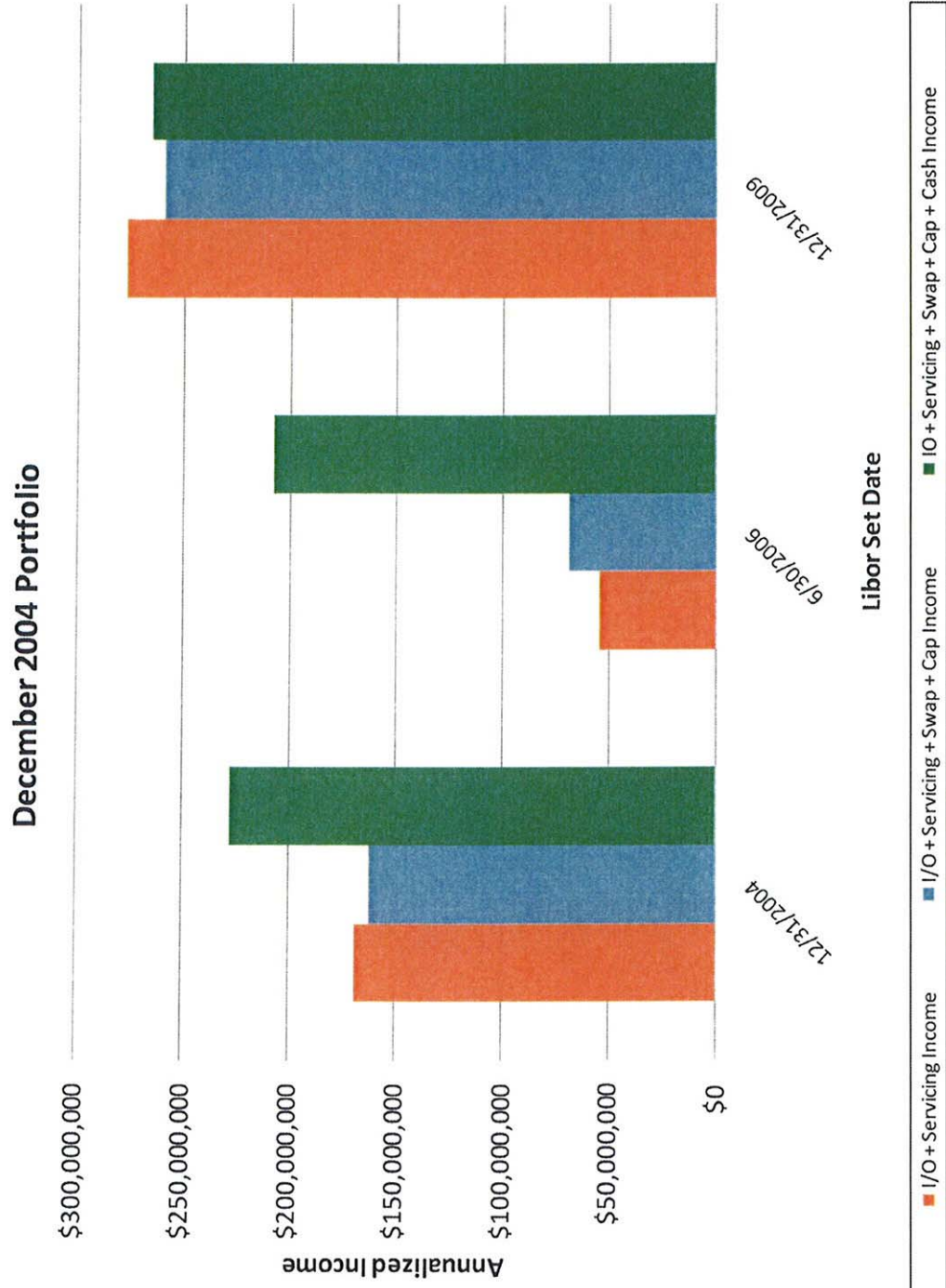


Annualized Hypothetical Income of the Dec-2004 Portfolios *Assuming historical LIBOR rates and cap at WAC, unless otherwise specified*



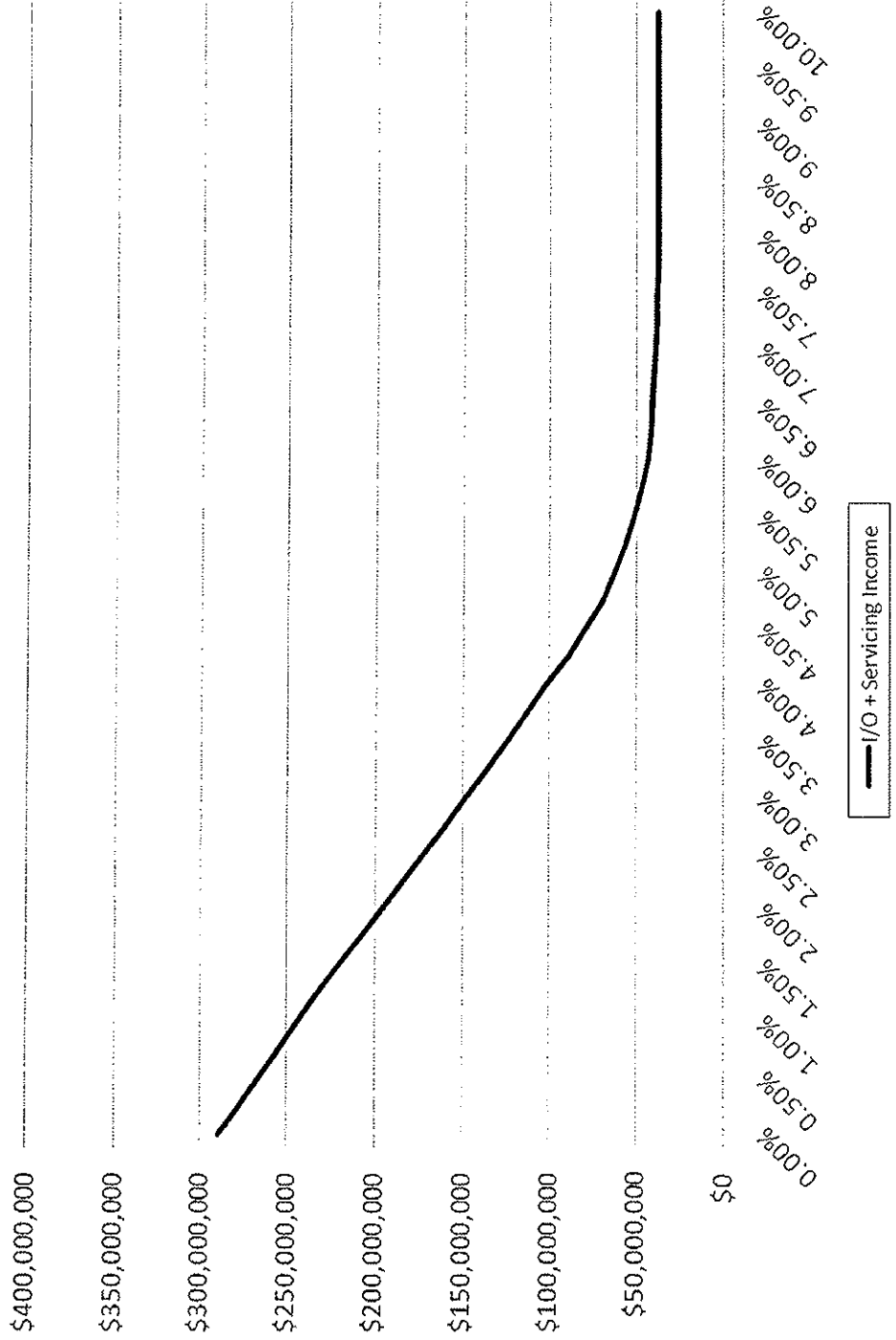
Annualized Hypothetical Income of the Dec-2004 Portfolios

Assuming historical LIBOR rates and cap at WAC, unless otherwise specified



Annualized Hypothetical Income of the Dec-2004 Portfolios *Assuming variable LIBOR rates, calls, and negotiated caps only*

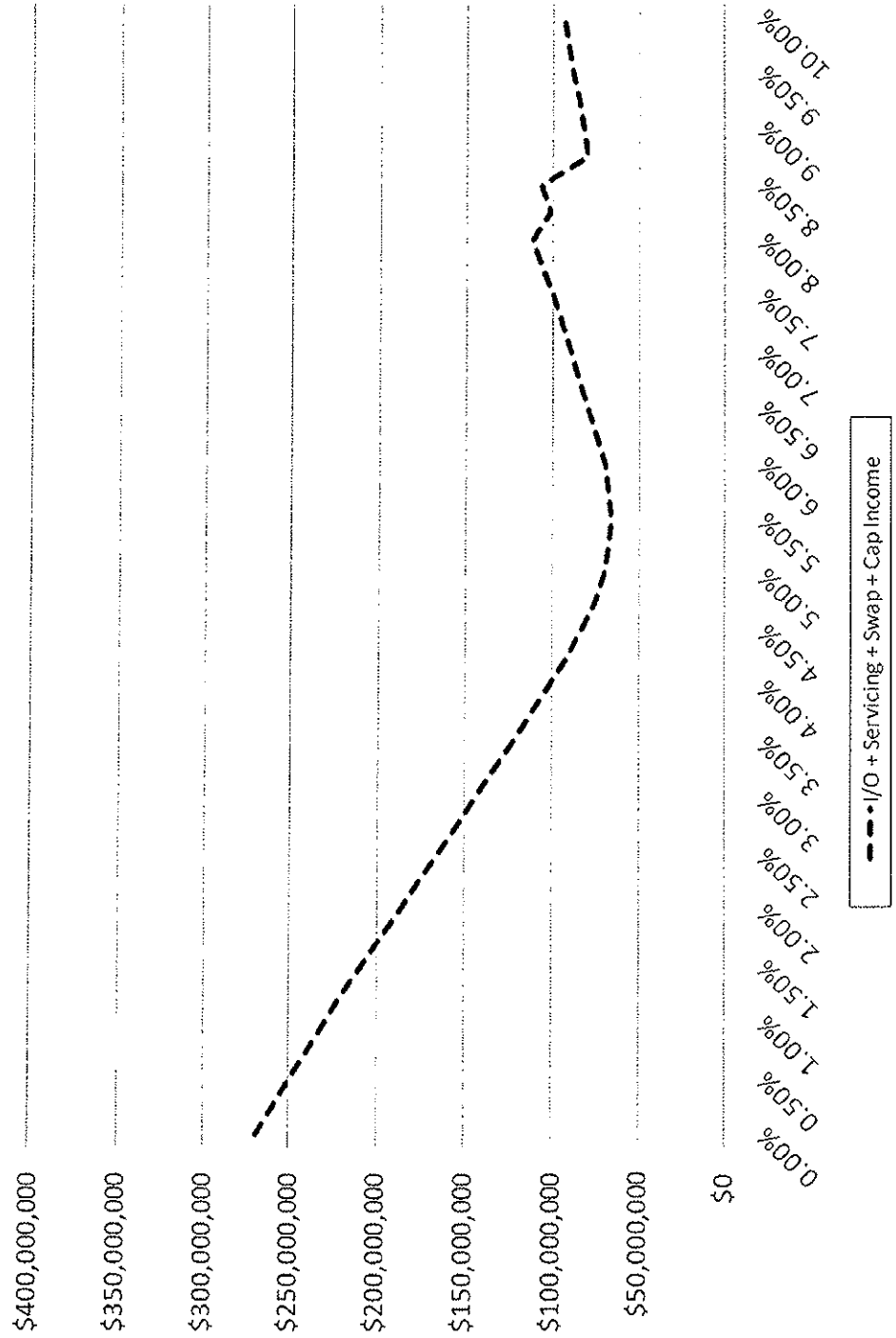
December 2004 Portfolio



P

Annualized Hypothetical Income of the Dec-2004 Portfolios *Assuming variable LIBOR rates, calls, and negotiated caps only*

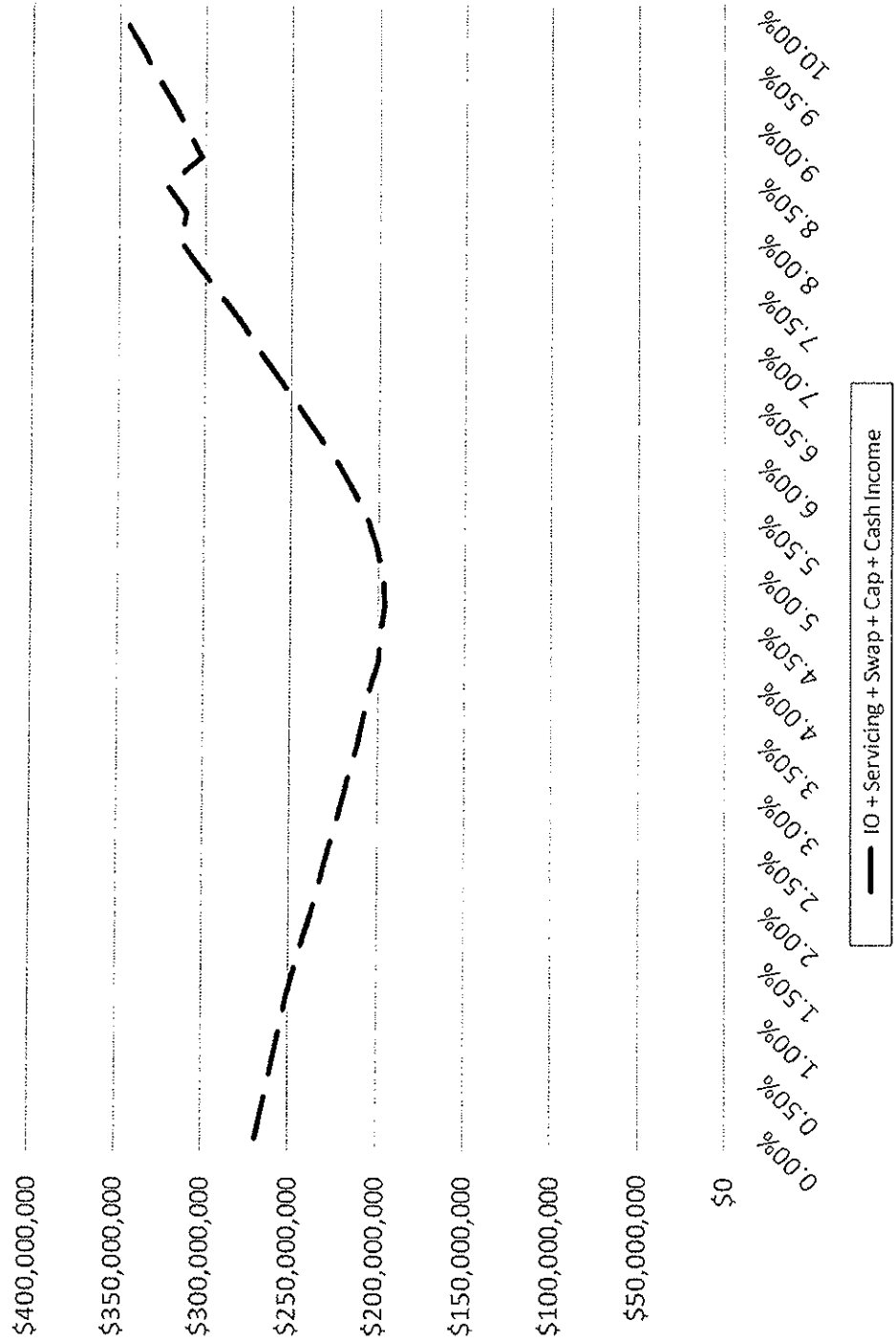
December 2004 Portfolio



R

Annualized Hypothetical Income of the Dec-2004 Portfolios *Assuming variable LIBOR rates, calls, and negotiated caps only*

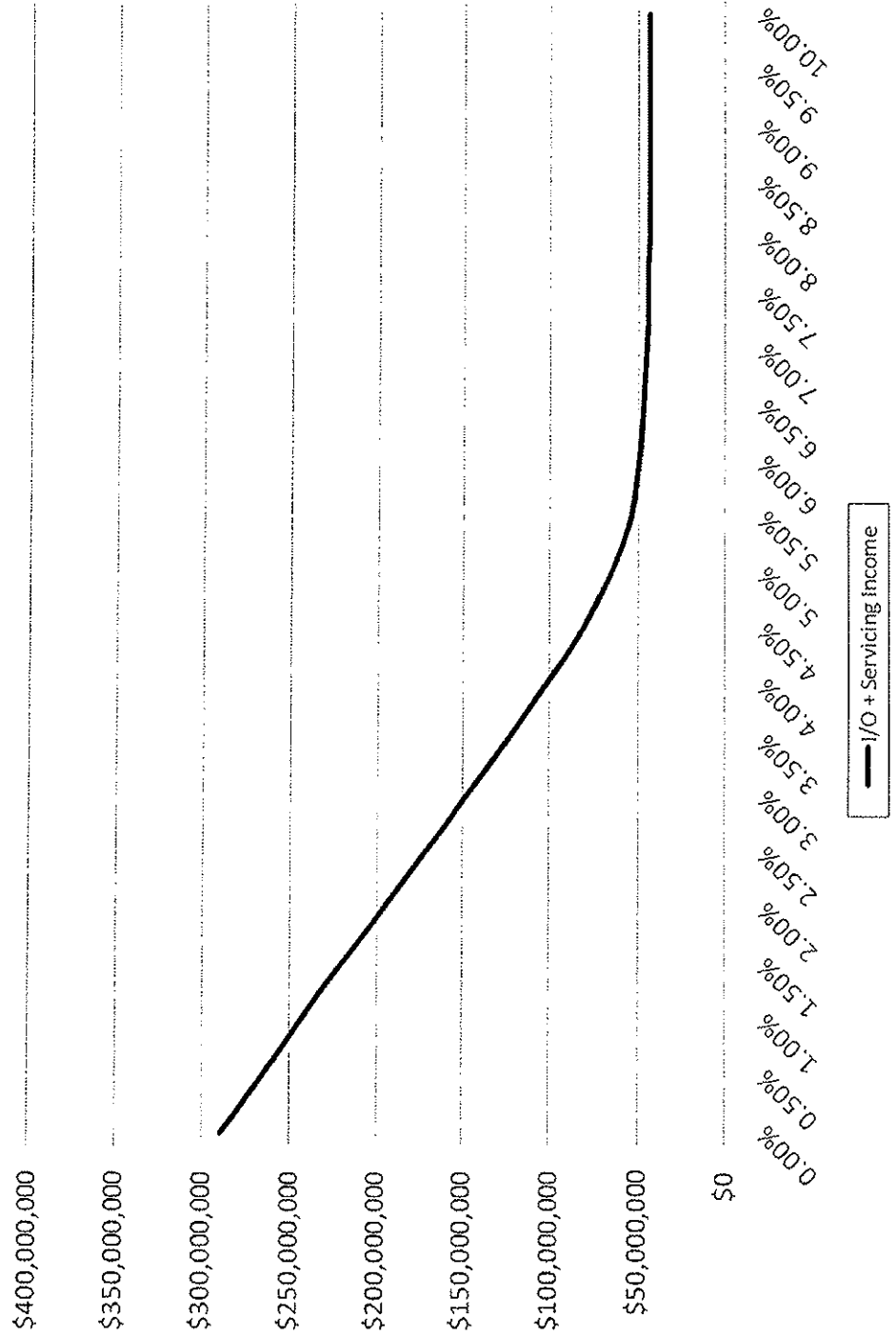
December 2004 Portfolio



R

Annualized Hypothetical Income of the Dec-2004 Portfolios *Assuming variable LIBOR rates and cap at WAC, unless otherwise specified*

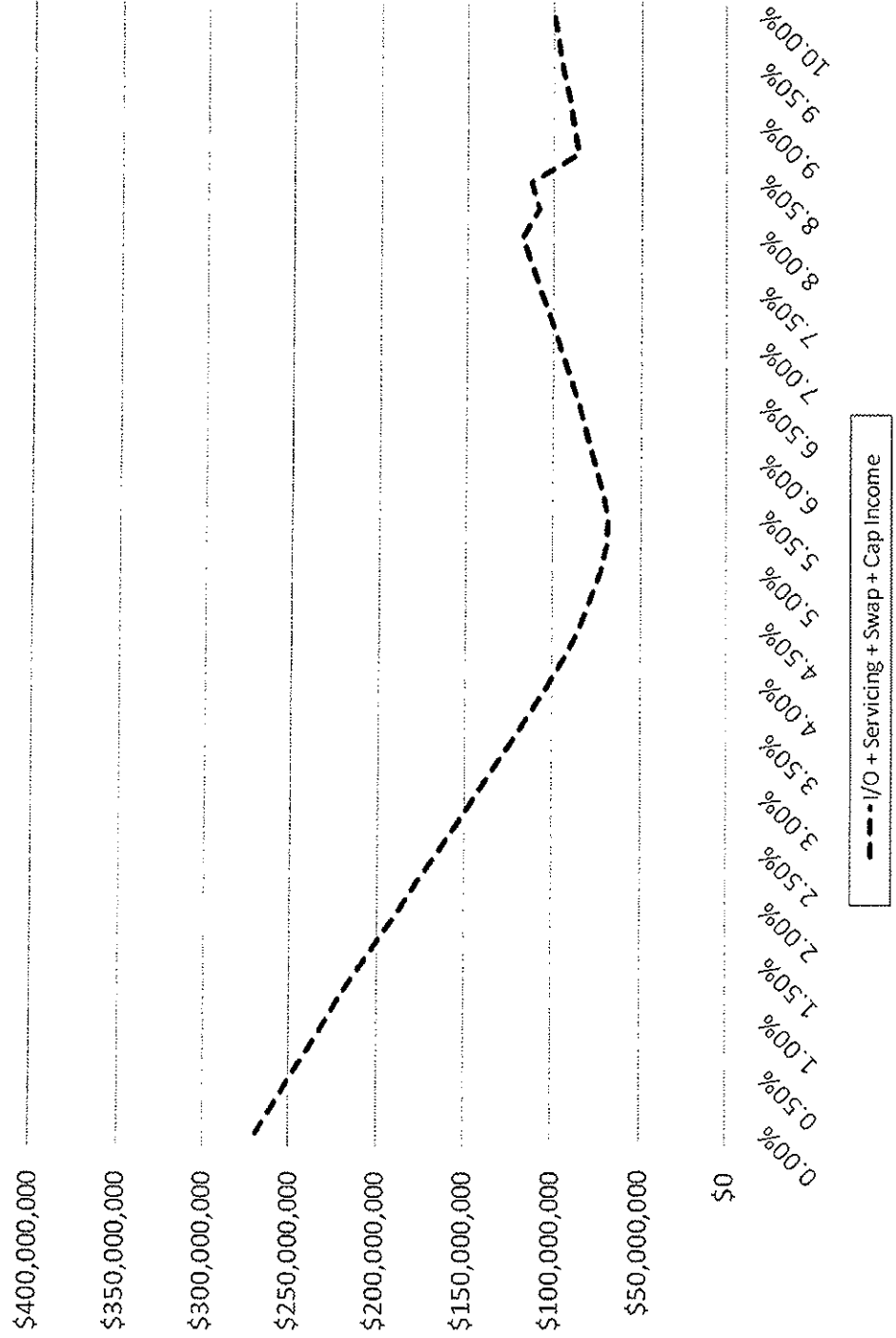
December 2004 Portfolio



— I/O + Servicing income

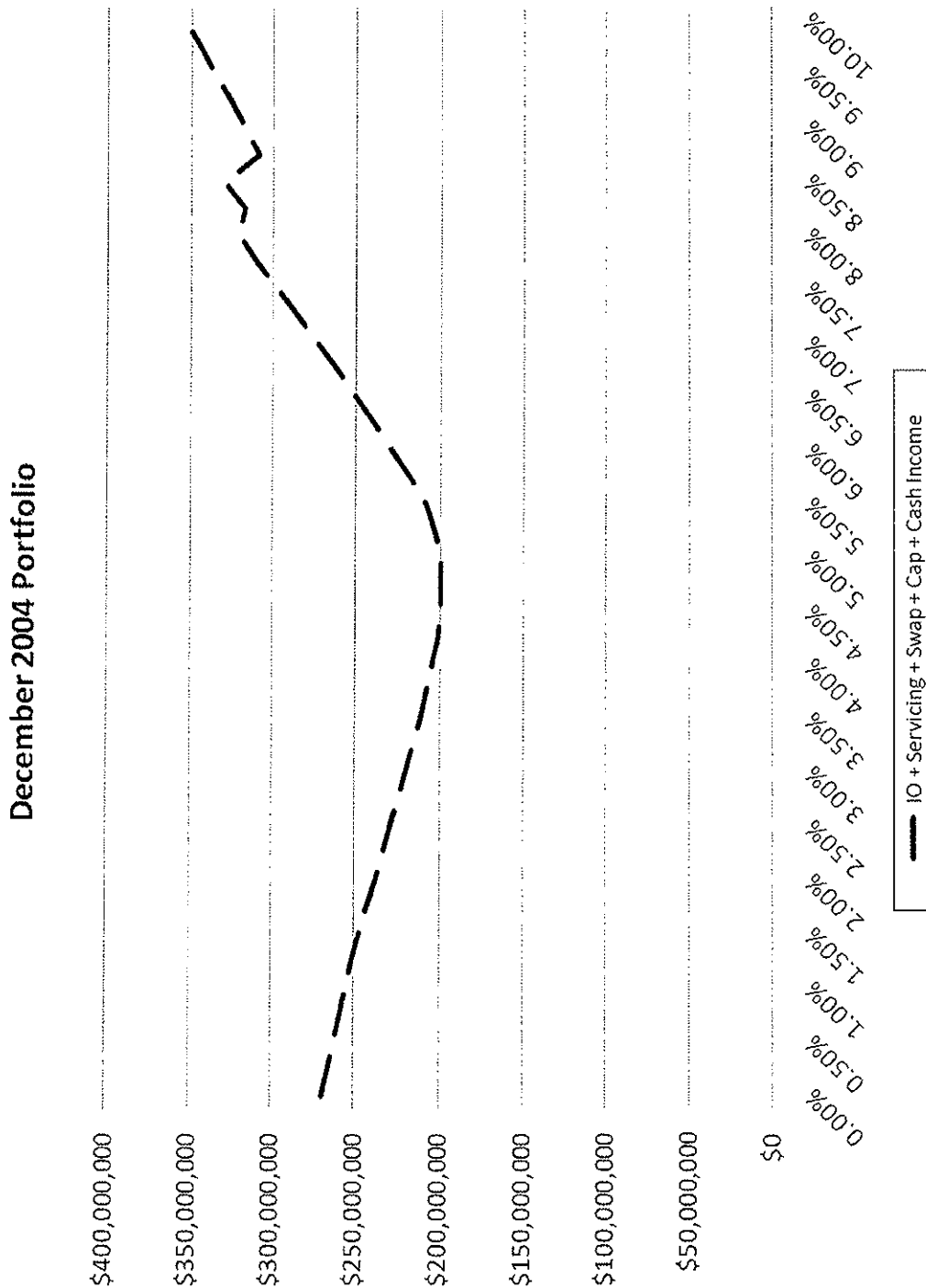
Annualized Hypothetical Income of the Dec-2004 Portfolios *Assuming variable LIBOR rates and cap at WAC, unless otherwise specified*

December 2004 Portfolio



Annualized Hypothetical Income of the Dec-2004 Portfolios

Assuming variable LIBOR rates and cap at WAC, unless otherwise specified



Doral's External Hedges

Doral purchased derivatives to manage interest rate risk

- Doral purchased derivatives as an alternative hedge against rising LIBOR interest rates
 - Interest rate caps on LIBOR
 - The interest rate cap pays Doral LIBOR less the cap rate when LIBOR exceeds the cap rate.
 - Interest rate swaps on LIBOR
 - Doral pays fixed and the other party pays LIBOR
 - Short Eurodollar futures
 - Eurodollar rates are “essentially the same as LIBOR”¹
 - Doral profits when LIBOR rates rise

1. “Options, Futures, and Other Derivatives,” John C. Hull, Seventh Edition, p. 136.

Doral's External Hedges

Short Eurodollar futures

- As of 12/31/04, Doral shorted \$7.1 billion in Eurodollar futures
- Shorting Eurodollar futures protects against rising interest rates
- For example:¹
 - Doral shorted 500 contracts at a futures price of 96.485, giving Doral protection if LIBOR exceeds the “contract rate” of 3.515% (=100-96.485)

(1) Bates Number DFC00496750

Doral's External Hedges

December 31, 2004

- Doral's LIBOR hedges provided protection against rising interest rates
 - Doral had \$2.6 billion in LIBOR caps and swaps
 - Doral had \$2.1 billion in LIBOR caps
 - Doral had \$500 million in LIBOR swaps
 - Doral had \$7.1 billion in Eurodollar futures with a weighted average contract rate of 3.9%